

Amendments to the Specification

1. Page 27, after the last paragraph [0111], please add the following new paragraphs:

Figures 25A and 25B are flowchart diagrams showing a possible procedure for converting a single asynchronous process into a corresponding new periodic process.

Figure 26 is a flowchart diagram showing a possible procedure for converting a set of asynchronous processes into a set of corresponding new periodic processes.

Figures 27A and 27B are flowchart diagrams showing a possible procedure for scheduling process executions during run-time.

Figure 28 shows an example of adjusting lengths of periods of a set of periodic processes.

Figures 29, 30, and 31 show examples of tables of safe start time intervals for asynchronous processes.

Figure 32 is a flowchart diagram showing a possible procedure for generating a feasible pre-run-time schedule for periodic processes with hard deadlines and periodic processes with soft deadlines.

2. Page 39, after paragraph [0160], please add the following new paragraph:

See Figures 25A and 25B for flowchart diagrams of the procedure.

3. Page 45, please replace the paragraph numbered [0175] with the following rewritten paragraph:

Above, the permitted range of the offset for each new periodic process newp_i , o_{newp_i} is ~~$\{0, \text{newp}_i\}$~~ $[0, \text{prd}_{\text{newp}_i} - 1]$.

4. Page 45, after paragraph [0175], please add the following new paragraph:

See Figure 26 for a flowchart diagram of the procedure.

5. Page 58, after paragraph [0204], please add the following new paragraph:

Figure 28 illustrates sorted lists of reference periods and the adjusted lengths of the periods of the processes in this example.

6. Page 79, after paragraph [0264], please add the following new paragraph:

See Figure 32 for a flowchart diagram of the procedure.

7. Page 62, please replace the paragraph numbered [0218] with the following rewritten paragraph:

As shown in Figure 17, the periodic process $p_D = (\text{o}_{p_D}, \text{r}_{p_D}, \text{c}_{p_D}, \text{d}_{p_D}, \text{prd}_{p_D})$ where $\text{r}_{p_D} = 2$, $\text{c}_{p_D} = 1$, $\text{d}_{p_D} = 4$, $\text{prd}_{p_D} = 12$, $0 \leq \text{o}_{p_D} \leq 4$, where the offset of p_D is set to a fixed value $\text{o}_{p_D} = 2$ by the ~~by the~~ procedure for constructing a feasible pre-run-time schedule for a given set of periodic processes with offsets when it attempts to construct a feasible pre-run-time schedule for $\text{newp}_A, p_B, p_C, p_D$.

8. Page 116, please replace the paragraph numbered [0355] with the following rewritten paragraph:

When a_A is not converted into a new periodic process, and the pre-run-time schedule is as shown in Figure 22, but without the time slots for $newp_{A0}$, $newp_{A1}$, $newp_{A2}$, ..., and without the time slot for a_E in Figure 22, the safe start time table for a_A should preferably contain the following “safe start time intervals”:
on processor 1: ~~$\{(k*6)+2\}$~~ $[(k*6)+2, (k*6)+2]$, $k = 0, 1, 2, \dots$
on processor 1: ~~$\{(k*6)+12\}$~~ $[(k*6)+12, (k*6)+12]$, $k = 0, 1, 2, \dots$

9. Page 116, please replace the paragraph numbered [0356] with the following rewritten paragraph:

When a_A is not converted into a new periodic process, and the pre-run-time schedule is as shown in Figure 22, but without the time slots for $newp_{A0}$, $newp_{A1}$, $newp_{A2}$, ..., and without the time slot for a_E in Figure 22, the safe start time table for a_E should preferably contain the following “safe start time intervals”:
on processor 1: empty;
on processor 1: empty;

10. Page 116, after paragraph [0356], please add the following new paragraph:

Figures 29, 30 and 31 illustrate tables of safe start time intervals in this example.